Integrated Engineering Capability (IEC) System Descriptions

Design & Data Management System

What is DDMS?

The Design and Data Management System (DDMS) is the software product that implements the capabilities of IEC. DDMS is a Web enabled system developed by the IEC Project. It is based on Windchill, a commercial Product LifeCycle Management (PLM) product which is also in use at Johnson Space Center (JSC) and Langley Research Center (LaRC). DDMS currently implements Project Management, Document Management and Change Management according to the standards and guidelines established at MSFC. Parts management is currently under development. Other capabilities are planned as well as collaboration and integration with other NASA centers using Windchill.

POC: **Patrick McDuffee**

Legacy Systems

Integrated Configuration Management System (ICMS)

ICMS maintains the official release record for MSFC released drawings, Engineering Parts Lists (EPL's), and Engineering Orders (EO's) and captures the as-designed configuration definition. This database is available to MSFC design engineers and other authorized individuals, and provides MSFC design engineers the capability to initiate engineering documentation releases. ICMS has an extensive reporting capability including Indentured Parts Lists and the As-Built/As-Designed Comparison Report. For access to ICMS, contact (b)(4) Users must have an IDS account.

Process POC: **Amy Hemken**
System POC: (b)(4)

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ICMS Change Accounting (formerly called Change Processing, Tracking, and Accounting System (CPTAS))

CPTAS was the official MSFC tool for configuration accounting until January 2005. At that time, the CPTAS user interface was shutdown, and a new user interface to the CPTAS database is in development under the Integrated Configuration Management System (ICMS) which is called ICMS Change Accounting. The intent of ICMS Change Accounting is to provide access to the historical CPTAS data and also to provide continued configuration accounting for those projects which were previously using CPTAS. ICMS Change Accounting will track the review and approval status of changes to configuration baselines controlled by a CCB and track all changes made to Configuration Items (CI). ICMS Change Accounting will provide the capability to track documentation changes and provide the history of all changes to CCB baselined documentation.

For new projects utilizing the IEC Design and Data Management System (DDMS), the configuration accounting is integrated into the use of online configuration management forms and electronic change processes, so a separate accounting system is not needed.

Process POC: (b)(4)
System POC:

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Data Requirements Management System (DRMS)

This web-based system provides access to the Center's Standard Data Requirement Descriptions (DRD's). It is used by Programs/Projects and any Center organization involved in a procurement. Access is available at **https://masterlist.msfc.nasa.gov/drm/**(MSFC internal access only).

Process POC: **Eugena Goggans**
System POC: **Gary McGriff**

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Project/Board Code Matrix

These database tables are used to establish and maintain project codes, project acronyms, CCB codes, and effectivities for projects utilizing the MSFC Release Desk/ICMS or CPTAS. It is accessible by the Release Desk through MPDMS.

Project/Board ent POC: MSFC Release Desk (b)(4)
System POC: (b)(4)

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Engineering Order (EO) Number Request and Trending System

This web-based system provides designers the capability to request Engineering Order (EO) numbers from the MSFC Release Desk, and then record the reason for the change for metrics/tracking purposes. Access is available at **https://masterlist.msfc.nasa.gov/eo/**(MSFC internal access only).

References:

- **Release Desk Administration Function**(MSFC internal access only)
- **EO System User's Manual**

Process POC: **Amy Hemken**
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Review Item Discrepancy System (RIDS)

This web-based system allows the automated entry and tracking of RIDS against documentation that is part of a design review data package. This system meets the requirements of MPR 8060.3. Access and registration are available at **https://msfcrids1.nis.nasa.gov/rids/RIDS_login.taf**.

References:

- **RID User's Guide**
- **RID Coordinator User's Guide**

Process POC (b)(4)
System POC:

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Virtual Research Center (VRC)

The Virtual Research Center (VRC) is a web based tool for collecting, archiving, reporting and managing program/project information in a standard, secure, scalable architecture built upon open source technology.

In December 1995, NASA Headquarters Office of Space Access and Technology (OSAT) initiated the development of the VRC. The VRC has continued to improve over the years and is in use today. A workspace for a program/project can be generated in 15 seconds and would provide the following tools: a library, a team directory, calendar, an action item tracker, a threaded discussion forum, chat rooms, issue poll, top 10 documents, and an activity log. In the library, teams can store any kind of file such as documents, drawings, spreadsheets, and presentations.

Read, write, execute access rules can be applied to a folder or individual file for a user or group of users to limit access within the workgroup. Through the team calendar, members can announce events, points of contact, times, and locations. The action item tracker enables team members to assign tasks to team members along with a description, due date, close date and resolution.

Using the threaded discussion forum, a team can identify issues and capture potential solutions. Teams can establish chat rooms for brainstorming and capture the discussion as a transcript. When the team has a choice between several potential implementations, the team leader can set up a poll and allow the team to vote on the issue. As team members add or remove items from the library, calendar, and action item tracker, a chronology record is kept in the activity log which is accessible to all team members within the workspace. Team members can download the contact database and calendar in a file format that is compatible with the Palm operating system enabling the team to capture team information in their Personal Data Assistant (PDA).

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Multiprogram/Project Documentation Management System (MPDMS)

This web-based system provides the control system for MSFC Multiprogram/Project Common-Use Documentation and supports the requirements of MPR 7120.2. MPDMS access and registration are available at **https://masterlist.msfc.nasa.gov/mpdms/**(MSFC internal access only). NOTE: MSFC Multiprogram documentation is also available through the NASA Technical Standards Program system at **http://standards.nasa.gov/**.

"MSFC-" document numbers are also assigned through the MPDMS. The MSFC Release Desk and MPDMS registered users with the correct access level can request "MSFC-" numbers.

Multiprogram Process POC: **Eugena Goggan**
MSFC Document Numbers Assignment POC: (b)(4) MSFC Release Desk/
System POC: **Gary McGriff**